REMARKS

This responds to the Office Action dated February 22, 2008.

Claims 1, 9, 17, 21, 25, and 31 are amended, claim 6 is canceled; as a result, claims 1-5 and 7-34 are now pending in this application.

§102 Rejection of the Claims

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 20, 21, 24, 25, 27, 29, 31, and 34 were rejected under 35 U.S.C. § 102(e) for anticipation by Kadous et al. (U.S. 2003/0095508 A1, "Kadous"). Applicant respectfully traverses the rejection, as applied to the claims when amended as proposed, because Kadous does not teach some of the elements recited in the claims.

Applicant cannot find in Kadous any disclosure of, among other things,

generating a channel state information packet to be transmitted back to the transmitter, wherein the packet includes the quantized channel response function when the packet is a first feedback packet sent to the transmitter or a first feedback packet sent after a channel interruption, and includes the quantized residual value of the channel response function otherwise,

as presently recited in claim 1 and similarly recited in claims 9 and 25, or

parsing a channel state information packet received from a device after transmitting a signal to the device to obtain a quantized channel response function of the signal wherein the channel state information packet includes the quantized channel response function when the packet is a first feedback packet sent to the transmitter or a first feedback packet sent after a channel interruption and includes a quantized residual value of the channel response function otherwise,

as presently recited in claim 17 and similarly recited in claims 21 and 31.

Instead, Kadous states that the feedback information may include the rate, the channel estimates provided by the channel estimator 164, and acknowledgement (ACK) or negative acknowledge (NACK).[1] Kadous also states that channel estimator 164 processes the recovered OFDM symbols to provide estimates of one or more characteristics of the communication channel, such as the channel frequency response, the channel noise variance, the signal-to-noise-

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[1] Kadous, ¶0027.

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and-interference ratio (SNR) of the received symbols, and so on.[2] Therefore, Kadous does not disclose "wherein the packet includes the quantized channel response function when the packet is a first feedback packet sent to the transmitter or a first feedback packet sent after a channel interruption, and includes the quantized residual value of the channel response function otherwise," as presently recited in claim 1.

Moreover, the cited portions of Kadous do not disclose "a residual value of the channel response function, wherein a channel estimate is subtracted from the channel response function to provide the residual value" as recited in claim 1. Therefore, Kadous does not teach transmitting a residual value under the conditions recited or incorporated into the claims.

Applicant respectfully requests withdrawal of the rejection and reconsideration and allowance of claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 20, 21, 24, 25, 27, 29, 31, and 34.

§103 Rejection of the Claims

1.   Claims 2, 5, 10, 13, 18, 22, 26, 28, and 32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kadous in view of Davidson et al. (U.S. 2002/0101840 A1, "Davidsson"). Applicant respectfully traverses the rejection. The Office Action fails to establish a proper *prima facie* case of obviousness because the proposed combination of Kadous and Davidsson does not teach or suggest some of the elements presently incorporated in the claims.

Claims 2 and 5 depend on base claim 1, claims 10 and 13 depend on base claim 9, claim 18 depends on base claim 17, claim 22 depends on base claim 21, claims 26 and 28 depend on base claim 25, and claim 32 depends on base claim 31. As set forth above, Kadous does not teach or suggest some of the elements of the base claims. Davidsson fails to teach or suggest those claim elements missing from Kadous.

Additionally, one of ordinary skill in the art at the time of the invention would not have reasonably looked to combine Davidsson with Kadous. The Office Action states that it would have been obvious … to combine the teaching of Davidsson with the system of Kadous for the benefit of achieving a wireless packet system that includes a timing drift compensation technique.[3] However, Davidsson refers to a radio receiver that includes a timing correction unit that performs timing drift compensation. Kadous refers to feedback information sent back to the

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[2] Kadous. ¶0025.
[3] Office Action, pg. 6.

transmitter to adjust processing.[4] Thus, one of ordinary skill in the art at the time of the invention would not have reasonably looked to Davidsson to solve a problem in Kadous because Davidsson solves the problem of timing drift compensation in the receiver, leaving no reason to send feedback information to adjust processing as in Kadous.

Applicant respectfully requests reconsideration and allowance of claims 2, 5, 10, 13, 18, 22, 26, 28, and 32.

2.   Claims 7, 15, 19, 23, 30, and 33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kadous in view of He et al. (U.S. 2004/0005010 A1, "He"). Applicant respectfully traverses the rejection. The Office Action fails to establish a proper *prima facie* case of obviousness because the proposed combination of Kadous and He does not teach or suggest some of the elements presently incorporated in the claims.

Claim 7 depends on base claim 1, claim 15 depends on base claim 9, claim 19 depends on base claim 17, claim 23 depends on base claim 21, claim 30 depends on base claim 25, and claim 33 depends on base claim 31. As set forth above, Kadous does not teach or suggest all of the elements of the base claims. He fails to teach or suggest the missing elements.

For example, Applicant cannot find in He any teaching or suggestion of among other things,

> generating a channel state information packet to be transmitted back to the transmitter, wherein the packet includes the quantized channel response function when the packet is a first feedback packet sent to the transmitter or a first feedback packet sent after a channel interruption, and includes the quantized residual value of the channel response function otherwise,

as presently recited in claim 1.

The Office Action states that He includes subtracting a channel estimate from the channel response function to provide a residual value of the channel response function.[5] Applicant respectfully disagrees with this characterization of He. Instead, He refers to subtracting a current estimate of the determined measure of intercarrier interference (ICI) from an output of a Fourier-based transform step performed in a receiver of the multicarrier modulation system, to produce

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[4] Kadous, ¶0027.
[5] Office Action, pg. 9.

an adjusted output of the Fourier-based transform step.[6] Thus, He subtracts ICI from an estimate of the channel response[7] instead of "wherein a channel estimate is subtracted from the channel response function to provide the residual value."

Also, the differences in the references would have made it unlikely that one of ordinary skill at the time of the invention would look to combine He with Kadous. The Office Action states that it would have been obvious … to combine the teaching of He with the system of Kadous for the benefit of achieving a system that includes equalization for accurately determining the frequency offset between the transmitter and receiver.[8]

However, He states that "Data equalization is performed using the channel response iteratively calculated as described. The implied ICI is constructed, and the output from the FFT in the OFDM receiver is adjusted to determine an estimate of transmitted OFDM data." Kadous refers to feedback information sent back to the transmitter to adjust the processing.[9] Thus, one of ordinary skill in the art at the time of the invention would not have reasonably looked to He to solve a problem in Kadous because He solves the problem of equalization in the receiver while Kadous describes adjustment in the transmitter.

Applicant respectfully requests reconsideration and allowance of claims 7, 15, 19, 23, 30, and 33.

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[6] He, ¶0035.
[7] He, ¶0036.
[8] Office Action, pg. 9.
[9] Kadous, ¶0027.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 612-371-2172 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 20th day of June 2008.

___Amy Moriarty___   _____
Name   Signature